

Ser. No. 09/975,572

In the Claims:

Please amend the claims as follows:

B1 1. (Currently Amended) A fastener arrangement for attaching one or more flat rectangular solar panels onto a rack formed of one or more channel members, in combination with the rack and panels, in which the channel member has an elongated slot with a pair of inwardly facing flanges defining said slot and defining a surface supporting said solar panels which extend across said slot; said fastener arrangement comprising a clip member having a generally T-shaped profile with a stem portion with opposed flat sides and a cap portion at an upper end of the stem member portion with flanges extending above said opposed flat sides, wherein the stem portion has a width sufficient to span across the slot of said channel member so that the stem portion rests on the pair of flanges of said channel member, and said with the flanges of said cap portion extending out along sides of the stem portion to define recesses at opposite sides of the clip holding the edges of said solar panels against said channel member; a threaded fastener member rotatable in said stem portion and extending downward therefrom; and a channel nut adapted to be disposed within the associated channel member of the rack and to engage the flanges of said channel member, the channel nut having female threads to receive said threaded fastener therein to tighten the flanges of said clip member against the solar panels onto the rack.

1 2. (Original) The fastener arrangement according to Claim 1 wherein said clip member is
2 injection molded of a sturdy plastic material.

1 3. (Currently amended) The fastener arrangement according to Claim 1 wherein stem portion
2 ~~has a width sufficient to span across said channel member,~~ and has a lower surface with
3 contoured ends that continue over edges of said channel member.

1 4. (Original) The fastener arrangement according to Claim 1 further comprising a pair of struts
2 joining said clip member with said channel nut.

B

Ser. No. 09/975,572

1 5. (Original) The fastener arrangement according to Claim 4 wherein said struts are resilient and
2 deformable to bend when the threaded fastener member is tightened down on said channel nut.

1 6. (Original) The fastener arrangement according to Claim 4 wherein said struts are frangible
2 member that break when the threaded fastener member is tightened down on said channel nut.

1 7. (Original) The fastener arrangement according to Claim 4 wherein said clip member, said
2 channel nut, and said struts are unitarily molded.

1 8. (Previously Amended) The fastener arrangement according to Claim 1 wherein said threaded
2 fastener member includes a pair of bolts arranged in a pair of holes in said clip member and
3 which are received in respective threaded sockets in said channel nut.

1 9. (Currently Amended) A solar collector arrangement comprising one or more parallel rows of
2 solar panels, each said row including:

3 a rack which comprises at least one elongated channel member, each said at least one
4 channel member having an elongated slot with a pair of inwardly facing flanges defining said
5 slot, said flanges forming a supporting surface on which the solar panels are disposed and
6 arranged across said slot;

7 a plurality of flat generally rectangular solar panels; and

8 a plurality of fastener arrangements holding said solar panels side by side onto said rack,
9 each said fastener arrangement including a clip member having a generally T-shaped profile with
10 a stem portion with opposed flat sides and a cap portion at an upper end of the stem member
11 portion with flanges extending above said opposed flat sides for engaging respective edges of
12 said solar panels crossing over said slot, said stem portion having a width sufficiently disposed
13 on the supporting surface and spanned across the slot onto the inwardly facing flanges of said at
14 least one channel member; a threaded fastener member rotatable in said stem portion and

B-

Ser. No. 09/975,572

15 extending downward therefrom; and a channel nut ~~adapted to being disposed within the channel~~
16 member engage the flanges of said channel member, the channel nut having female threads to
17 receive said threaded fastener member therein such that the channel nut can be tightened to
18 engage the flanges of the channel member to hold the edges of the solar panels against the at least
19 one channel member of the rack.

UBI
ant
1 10. (Previously amended) A solar collector arrangement according to Claim 9 further
2 comprising strips of glazing material interposed between said solar panels and respective ones of
3 said at least one channel member to provide cushioning and electrical isolation between said
4 solar panels and said channel members.

1 11. (Original) A solar collector arrangement according to Claim 9 further comprising at least one
2 extruded resilient filler gasket disposed between adjacent ones of said solar panels at one or both
3 sides of each of said fastener arrangements.

1 12. (Original) A solar energy collection arrangement according to Claim 11 wherein gasket is
2 made of a rubberlike material.

1 13. (Original) A solar energy collection arrangement according to Claim 11 wherein said gasket
2 has a pair of spaced flanges along each of two opposed edges, each pair defining a receptacle for
3 fitting over an edge of a solar panel.

1 14. (Currently Amended) A solar collector arrangement comprising at least one support beam,
2 an array of rectangular solar panels attached along said support beam such that edges of said
3 support beam solar panel extend across said support beam, and a plurality of clamps for clamping
4 said rectangular solar panels onto said support beam, each said clamp including an upper clamp
5 portion having a generally T-shaped profile with a central stem and a pair of transverse flanges at
6 upper edges of said central stem; the central stem and said pair of transverse flanges being

B

Ser. No. 09/975,572

7 disposed onto and spanning across the support beam; at least one threaded fastener member
8 passing through said central stem; a lower clamp member portion shaped to clamp against a
9 portion of said support beam to hold the upper clamp member portion down against said support
10 beam, and adapted to receive said lower clamp portion having at least one threaded portion
11 receiving said at least one threaded fastener member for tightening down said flanges of the
12 upper clamp portion to hold against the support beam the edges of the solar panels that cross over
the support beam.

UB
com 4
15. (Original) Solar collector arrangement according to Claim 14, wherein said lower clamp
2 portion has a pair of bolt receiving portions and an arched portion between said bolt receiving
3 portions.

1 16. (Original) Solar collector arrangement according to Claim 14, further comprising at least one
2 strip of a glazing material situated on said support beam for cushioning said solar panels.

1 17. (Currently Amended) A method of installing flat solar panels onto a support formed of one
2 or more elongated support beams, comprising: the steps of: applying strips of glazing material
3 onto one or the other of edges of the solar panels and said support beams; positioning the panels
4 in place on the support beams so that the panels are held by the strips of glazing material onto the
5 beams, with the panels oriented so that the edges of the panels are at a right angle to said support
6 beams; attaching to the support beams, in spaces between adjacent ones of said panels, fastener
7 clips, each said fastener clip including a clip member having a generally T-shaped profile with a
8 stem portion with opposed flat sides and a cap portion at an upper end of the stem member
9 portion with flanges extending above said opposed flat sides, said stem portion and said flanges
10 being placed onto and spanned across the support beam; a threaded fastener member rotatable in
11 said stem portion and extending downward therefrom, and a retainer member adapted to engage
12 being disposed upon and engaging a portion of the associated support beam, the retainer member
13 having threads to receive said threaded fastener member therein; and rotating said threaded

B

Ser. No. 09/975,572

14 fastener member to clamp said clip member to hold said edges of said adjacent panels on said
15 support beam.

1 18. (Original) A method of installing flat solar panels onto a support according to Claim 17,
2 further comprising running electrical wires carrying power from said panels through a wireway
3 formed in said support beams.
4

1 19. (Original) A method of installing flat solar panels onto a support according to Claim 17,
2 wherein said support beam includes a channel member having one slotted side with a pair of
3 inwardly directed flanges defining a slot therebetween; and said step of attaching said fastener
4 clips includes for each such clip inserting the retainer member thereof through the slot, and by
5 rotating said threaded fastener member drawing said retainer member against said inwardly
6 directed flanges.